

APPLICANT(S): BAGLIONI, Piero et al.  
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### AMENDMENTS TO THE CLAIMS

Please add new claim 28.

#### Listing of Claims

1. (Previously Presented) A process for the preparation of unmixed hydroxide of group II metals and transition metals in the form of micro-particles or nano-particles comprising reacting, in aqueous or organic phase, a metal compound and an alkaline hydroxide to form an unmixed metal hydroxide of group II metals or transition metals.
2. (Previously Presented) The process according to claim 1, wherein the group II metals and transition metals are selected from the group consisting of: zinc, zirconium, titanium, magnesium, iron, cobalt or nickel.
3. (Original) The process according to claim 1, wherein the metal compound is a salt soluble in water.
4. (Previously Presented) The process according to claim 3, wherein the salt is a: chloride, nitrate or acetate.
5. (Previously Presented) The process according to claim 3, wherein the salts are:  $ZrCl_4$ ,  $ZrOCl_2$ ,  $TiCl_4$ ,  $TiF_4$ ,  $TiOCl_2$ ,  $Mg(NO_3)_2$ ,  $Co(NO_3)_3$ ,  $ZnCl_2$ ,  $Ni(NO_3)_2$  or  $FeCl_3$ .
6. (Previously Presented) The process according to claim 1, wherein:
  - a) a solution of a group II or transition metal chloride and an aqueous solution of an alkaline hydroxide are made to react in homogeneous phase; and
  - b) the metal hydroxide is collected by centrifugation, filtration or decanting and optionally purified by washing or treatment with ultrasound.
7. (Original) The process according to claim 6, wherein the chloride of the transition metal is dissolved in water or in an organic solvent miscible with water.

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8. (Original) The process according to claim 7, wherein the organic solvent is selected from the group consisting of diols, 1,2,3-propanetriol and dimethyl sulphoxide.

9. (Original) The process according to claim 8, wherein the diol is selected from the group consisting of 1,2-ethanediol and 1,2-propanediol.

10. (Original) The process according to claim 6, wherein the reaction in step a) is carried out at a temperature ranging between 50° and 180°C.

11. (Previously Presented) The process according to claim 21, wherein the calcination takes place at a temperature ranging between 250° and 1100°C

12. (Previously Presented) Hydroxides of group II and transition metals in the form of particles having dimensions ranging between 10 and 1000 nm obtained according to the process defined in claim 1.

13. (Previously Presented) The hydroxides according to claim 12, wherein the particles have dimensions ranging between 50 and 500 nm.

14. (Previously Presented) Dispersions containing the hydroxides as defined in claim 12.

15. (Original) Dispersions according to claim 14, wherein the liquid of the dispersion is selected from the group consisting of water, ethanol, propanol and isopropanol.

16. (Previously Presented) Process for the coating of ceramic surfaces, textile products, or paper materials comprising:

coating the ceramic surfaces, textile products or paper materials with hydroxides as defined in claim 12.

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17-20. (Canceled)

21. (Previously Presented) The process according to claim 1 further comprising preparation of an unmixed oxide of group II metals or transition metals in the form of micro-particles or nano-particles by:

performing calcination of the metal hydroxide to form an unmixed metal oxide of group II metal or transition metal.

22. (Previously Presented) The process according to claim 21, wherein the metal hydroxide is calcinated in air or in inert atmosphere.

23. (Previously Presented) Oxides of group II and transition metals in the form of particles having dimensions ranging between 10 and 1000 nm obtained according to the process defined in claim 21.

24. (Previously Presented) The oxides according to claim 23, wherein the particles have dimensions ranging between 50 and 500 nm.

25. (Previously Presented) Dispersions containing the oxides as defined in claim 23.

26. (Previously Presented) Dispersions according to claim 25, wherein the liquid of the dispersion is selected from the group consisting of water, ethanol, propanol and isopropanol.

27. (Previously Presented) Process for coating of ceramic surfaces, textile products, or paper materials, the process comprising:

coating the ceramic surfaces, textile products or paper materials with oxides as defined in claim 21.

28. (New) The process according to claim 1, wherein the unmixed oxide of group II metals or transition metals are in the form of nano-particles.